

Energy Storage Cost Estimate for New Jersey

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The cost of a battery energy storage system (BESS) usually include the two main component costs:

- Energy cost: this is the cost of the battery modules. This cost is based on the energy capacity of the battery in MWh.
- Power Cost: this is the cost for the power conversion systems (i.e., inverters). This cost is based on the power capacity of the inverters in MW.

The cost estimates used in this report are based on Sandia's 2018 Energy Storage Pricing Survey. The energy and power costs of Li-ion BESS are used to estimate the total cost of BESS to meet 2021 and 2030 power capacity targets with 4-hour, 6-hour and 8-hour batteries.

Target Year	Duration (hours)	Energy Target (MWh)	Energy Cost (\$)	Power Target (MW)	Power Cost (\$)	Total Cost (\$)
2021	4	500	\$420,100 x 500 = \$210.05 M	125	\$466,300 x 125 = \$58.287 M	\$268.337 M
2021	6	750	\$406,800 x 750 = \$305.1 M	125	\$466,300 x 125 = \$58.287 M	\$363.387 M
2021	8	1000	\$402,200 x 1,000 = \$402.2 M	125	\$466,300 x 125 = \$58.287 M	\$460.487 M
2030	4	8000	\$420,100 x 8,000 = \$3,360.8 M	2000	\$466,300 x 2000 = \$932.6 M	\$4293.4 M
2030	6	12000	\$406,800 x 12,000 = \$4,881.6 M	2000	\$466,300 x 2000 = \$932.6 M	\$5814.2 M
2030	8	16000	\$402,200 x 16,000 = \$6,435.2 M	2000	\$466,300 x 2000 = \$932.6 M	\$7367.8 M

Assumptions:

- The analysis uses 2018 price data
- The cost of storage is assumed to be constant
- A discount rate of 0% was assumed (present value = future value)



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